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GRC Environmental Programs Manual—Chapter 11

Floodplain and Wetlands Management

Approved by: Energy and Environmental Management Office Chief

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Change Record

| Revision | Effective Date | Expiration Date | C-25, Change Request # | Description |
|----------|----------------|-----------------|------------------------|---|
| A | 4/2015 | 4/2020 | | <p>5.2 SHED has been changed to EEMO</p> <p>5.3 SHED replaced with EEMO Chief and the Natural Resources Program Manager in regarding the necessity of applying to the Army Corps of Engineers for a permit and also reviews all floodplain and wetlands permit applications.</p> <p>7.0 "Wetlands at Lewis Field and Plum Brook Station have not been officially delineated" has been replaced with "Wetlands at Lewis Field and Plum Brook Station were officially delineated in 2012 in the Wetlands and Other Waters Delineation Report"</p> <p>Updated all form links to reflect the NASA Electronic Form portal. Corrected several form names.</p> |
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***Include all information for each revision. Do not remove old revision data. Add new rows to table when space runs out by pressing the tab key in the last row, far right column.*

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Chapter 11.—Floodplain and Wetlands Management

***NOTE:** This chapter is maintained and approved by the Energy and Environmental Management Office (EEMO). The last revision date of this chapter was March 2015. The current version is maintained on the Glenn Research Center internet at <http://www.grc.nasa.gov/WWW/FTD/EEMO/index.html>. Approved by: Chief of Energy and Environmental Management Office.*

1.0 PURPOSE

This chapter establishes policies and procedures for dealing with projects and programs that could impact floodplains or wetlands at Glenn Research Center (GRC) Lewis Field and Plum Brook Station.

2.0 APPLICABILITY

This chapter is applicable to all GRC actions (Appendix A) that may have an impact on wetlands or floodplains at GRC or at any NASA-controlled, Government-owned facilities associated with GRC. It is applicable to GRC employees and contractors at all levels who in any way participate in the formulation, development, and execution of qualifying NASA actions.

3.0 BACKGROUND

In the 1600s, over 220 million acres of wetlands are thought to have existed in the lower 48 states. Since then, extensive losses have occurred, and over half of our original wetlands have been drained and converted to other uses. The years from the mid-1950s to the mid-1970s were a time of major wetland loss, but since then, the rate of loss has decreased.

In addition to these losses, many other wetlands have suffered degradation of functions, although calculating the magnitude of the degradation is difficult. These losses, as well as degradation, have greatly diminished our Nation's wetlands resources; as a result, we no longer have the benefits they provided. The increase in flood damages, drought damages, and the declining bird populations are in part the result of wetlands degradation and destruction.

4.0 POLICY

It is GRC policy to restore, preserve, and protect the natural and beneficial values provided by floodplains and wetlands. In carrying out this policy, GRC will avoid adverse impacts associated with the occupancy and modification of floodplains and wetlands.

The primary mechanism through which the Federal Government protects wetlands is Section 404 of the 1972 Clean Water Act. Section 404 has an established legal history of broad interpretation that requires that any actions that disturb or eliminate wetlands be approved by the Army Corps of Engineers. In conjunction with this law is a related set of laws governing the management of floodplains. These laws include the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Authority for floodplain management is included in Executive Orders 11988 and 11990. These orders require that each agency evaluate the potential effects of its actions on floodplains. Agencies should not undertake actions that directly or indirectly induce growth in the floodplain unless there is no practical alternative. Agency regulations and operating procedures for licenses and permits should include provisions for the evaluation and consideration of flood hazards.

5.0 RESPONSIBILITIES

5.1 Facilities Division (FD) National Environmental Policy Act Coordinator

The National Environmental Policy Act (NEPA) Coordinator reviews all proposed projects to identify activities in floodplain and wetlands and works with the NEPA Program Lead for floodplain or wetlands permit applications.

5.2 FD Program Managers

The FD Program Managers coordinate with the EEMO NEPA Program Lead on any proposed projects with the potential to impact wetlands or floodplains.

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5.3 NEPA Program Lead

The NEPA Program Lead maintains an inventory of all known GRC floodplain and wetlands maps. The Program Lead validates the need for permit applications. The NEPA Program Lead is responsible for consulting with the EEMO Chief and the Natural Resources Program Manager regarding the necessity of applying to the Army Corps of Engineers for a permit and also reviews all floodplain and wetlands permit applications. The NEPA Program Lead maintains copies of all existing floodplain and wetlands permits.

5.4 Supervisors

All GRC supervisors shall be cognizant of GRC policy regarding floodplain and wetlands management and shall use their authority to uphold the goals of this program.

6.0 REQUIREMENTS

6.1 Comply With Section 404 of the 1972 Clean Water Act

Actions that could meet these criteria are brought to the attention of the NEPA Program Leads through the NEPA review process (Chapter 2). If the proposed action warrants a permit application, the NEPA Program Lead shall follow the procedures outlined in Section 404. A generalized flowchart of wetland and floodplain actions review process at GRC is portrayed in Appendix B.

6.2 Comply With Coastal Zone Management Program (15 CFR Part 923)

The Coastal Zone Management Act (CZMA) was enacted to encourage coastal states, Great Lake states, and United States territories to develop comprehensive programs to manage and balance competing uses of and impacts to coastal resources. This act applies to isolated properties belonging to Plum Brook Station with Ohio's coastal zone.

7.0 RECORDS

- Floodplain and wetland maps (from the Army Corps of Engineers).—Maintained by the NEPA Program Lead. Wetlands at Lewis Field and Plum Brook Station were officially delineated in 2012 in the Wetlands and Other Waters Delineation Report.
- Permit applications.—Maintained by the NEPA Program Lead.

8.0 REFERENCES

| Document Number | Document Name |
|----------------------------------|---|
| 15 CFR Part 923 | Federal Coastal Zone Management Program Regulations |
| 33 CFR Parts 320 through 336 | U.S. Army Corps of Engineers Regulatory Program |
| 40 CFR Parts 22, 230 through 233 | Environmental Protection Agency Wetlands Protection |
| Executive Order 11988 | Floodplain Management |
| Executive Order 11990 | Protection of Wetlands |

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APPENDIX A.—DEFINITIONS AND ACRONYMS

Action.—Activity including, but not limited to, the acquisition, construction, modification, change in land use, issuance of facilities use permits, and disposition of Federal lands and facilities.

Coastal Zone Management Act (CZMA).—The act provides for management of the Nation’s coastal resources, including the Great Lakes, and balances economic development with environmental conservation.

Code of Federal Regulations (CFR)

Critical action.—Any activity for which even a slight chance of flooding would be too great, such as storing highly toxic materials.

Energy and Environmental Management Office (EEMO)

Facilities Division (FD)

Floodplain.—The lowland and relatively flat areas adjoining inland and coastal waters, including the flood-prone areas of offshore islands and including, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year. The base floodplain shall be used to designate the 100-year floodplain (1 percent chance floodplain). The critical action floodplain is defined as the 500-year floodplain (0.2 percent chance floodplain). A large portion of GRC floodplains also encompasses wetlands.

Glenn Research Center (GRC)

National Environmental Policy Act (NEPA).—Federal legislation that establishes the national policy for protecting the human environment. Refer to Chapter 2.

Wetlands.—Those areas that are frequently inundated by surface or ground water and normally support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, river overflows, wet meadow, and natural ponds.

APPENDIX B.—WETLAND AND FLOODPLAIN ACTIONS REVIEW PROCESS

